

“A connected system of parks and pathways is manifestly far more complete and useful than a series of isolated parks.” — F.L. Olmstead

Regional Trail Systems



Rails-to-Trails Conservancy

The development patterns of post-WWII America scattered us across the landscape. Sprawl development patterns contributed to a loss of open space, increasing traffic congestion, disinvestments in urban areas, public health problems associated with a sedentary lifestyle, deteriorating air and water quality, economically inefficient infrastructure investment, and a reduced sense of community.¹

In response to these problems, a movement has arisen in communities across the United States in support of smarter patterns of growth and development that are consistent with a strong economy, a healthy environment and a high quality of life for all.² Awareness has been heightened of the need to address this set of issues in an integrated fashion. Strategies to address these negative impacts of sprawl growth are starting to emerge and successes are beginning to be seen.³ The benefits of a regional greenway system lie at the nexus of many of these interlinked issues and can help mitigate many of the negative impacts listed above, and thus should be considered part of an overall regional-development paradigm.⁴

Recognition that regions are now the dominant active economic paradigm has taken hold. In *Reflections on Regionalism*, Katz writes "...cities, suburbs, and green space cannot be considered in isolation. The fundamental premise of regionalism is that places have relationships and connections to other places that should not be ignored." (Katz 2000, p. 3). Human activity now takes place on a regional basis. It is not uncommon now for people to live and work and play over an entire region. Similarly, our understanding of natural systems has grown to realize that these too play out over very large geographic areas. Regions that want to remain economically viable must ensure that the entire area and not just isolated communities is attractive to potential employers and their employees. Development of a regional greenway system helps to produce a high quality-of-life status for the entire area and improve the attractiveness of the entire region.

The challenge that arises with regard to creation of regional greenway systems stems from the fact that adjoining jurisdictions almost inevitably are predisposed to working against each other rather than in concert. Neighboring jurisdictions consistently vie with one another to attract employers and other revenue-generating development.

To this critical point of cooperation by jurisdictions within a region, Katz writes "Regionalists argue that many pressing environmental, social, and governance problems cannot be solved by independent jurisdictions acting alone...Their conclusion is that cross-jurisdictional problems demand cross-jurisdictional solutions...[and] Cross-jurisdictional solutions, in turn, demand strong, cross-jurisdictional coalitions." (Katz 2000, p. 3). The regional greenway systems that have flourished already serve as

¹ See, for example, "Once There Were Greenfields." By F. Benfield.

² See, for example, "Welcome to Smart Growth America." By Smart Growth America

³ See, for example, "Solving Sprawl." By F. Benfield

⁴ See, for example, "Trails and Greenways: Advancing the Smart Growth Agenda." By H. Morris.

examples of strong cross-jurisdictional coalitions. Indeed, without such coalitions, regional efforts, of any sort, will struggle to be successful.

To the extent that regional greenway projects are underway, there are several obstacles that exist which can dampen the potential benefits of such a system. These include:

- Narrow focus – Some green infrastructure projects focus upon recreation or open space conservation without understanding the wider range of health, transportation, and community development benefits.
- Regional equity – In some regions, investment in greenway projects are targeted to middle- and upper-income areas without ensuring that low-income urban neighborhoods share in the benefits.
- Regional cooperation – In some places, there is little history of cooperation between urban, suburban, and rural areas, which creates obstacles to developing trails and greenways that cross local jurisdictional boundaries.
- Lack of information – Some regions simply lack the basic information or the tools necessary to move a regional greenway system forward.

This paper, while recognizing that no two regions are alike and that there is no cookie-cutter approach to developing and implementing a regional greenway system, highlights models of organization, planning, and implementation and suggests, in broad strokes, methods to achieve a regional greenway system. Specifically, the following pages look at:

- Models of regional greenway organization and structure—This section looks at a variety of models, the big-picture relationship between various levels of government, other involved parties, and overall funding mechanisms.
- Pieces of the puzzle—this section looks at various elements needed for a regional greenway system, such as land and money, and where to find them.
- Process—this section looks at the process of putting the pieces together by developing a regional greenway implementation mechanism.

2.0 Key Characteristics of Organizational Models

As a region's desire for a regional greenway system develops, consideration should be given to the relationship between the various levels of government that are, by definition, involved in a regional program. In some cases, an entirely new layer of government is created, such as a regional park district, complete with its own governing structure and revenue creation authority. In others, the organization is created out of existing government entities that come together in a loose, though committed, affiliation to coordinate the creation of a regional greenway network, even though implementation and/or management may be handled by the appropriate locality.

Over the past decade, Rails-to-Trails Conservancy's (RTC) has participated in the Southeast Michigan Greenway Project, an effort to develop a regional trail and greenway system in the seven-county area. As part of that project, a study was commissioned for a report by Professor Donna Erickson of the University of Michigan to catalogue various organizational models that have been used around the country to bring regional greenway systems to fruition. This research, summarized in Table 2.1, examined a variety of topics affecting the success of a regional greenway system project, including:

- Project conception—there is no one route for project initiation that would lead to a greater chance of success. Several of the case studies were initiated by the general public, others by local leaders and, at the far end of the spectrum, the state of Maryland has a long history of state-initiated land protection.
- Project participants—Each of the case studies involved a variety of public and private participants.
- Funding—Each of the study areas use a variety of funds from a variety of sources, including all levels of government as well as private.
- Ownership and management—Actual control over the land, in terms of both ownership and management, can vary. In some areas, local jurisdictions both own and manage the particular facilities within their borders. In other places, each local jurisdiction owns the land, but the regional greenway authority manages the entire system. In other areas, the reverse can be true: the regional agency acquires the land but management is carried out by local governments.
- Institutional structures for implementation—Central to the development and implementation of a regional greenway system is the need for an organizing method or institutional arrangement.

The case studies showed that successful regional greenway projects had several common ingredients, including:

- Commitment and leadership—the existence of strong commitment and leadership more than any other factor, including money, made for a successful regional greenway system in the long run. This includes ongoing support from public officials, public agencies, citizens groups, and community leaders. While grassroots support is often viewed as the hallmark of greenway projects, it is not enough because these projects are public and as such must eventually engender the support of public decision makers and the agencies that implement such projects. Out of that commitment, another key ingredient emerges: a plan of action.
- Plan of action—plans have a way of becoming self-fulfilling. Certainly, without one, a project, of any type, would not advance. The creation of a plan, even an initial brief “vision” document has a way of making a project more real in the eyes of others who need to buy into the project. Such plans are an essential element in the final critical ingredient: education and participation.
- Education and participation—efforts to involve and educate the public about a trail or greenway project, regional or otherwise, inevitably leads to greater sense of commitment, buy-in, and ownership by the people who will use the facilities. Such efforts are a way to stem any opposition that develops. Holding design charrettes open to community members not only helps to develop a sense of input but also tends to result in a better product. In each of the study areas, some small levels of opposition were experienced, but always in relation to a particular element of the regional greenway plan, never to the entire plan itself. The closest such a widespread concern came was in Portland, Oregon where there was concern over a significant amount of land being taken off the tax rolls.

Significant challenges to the creation of a regional greenway system include:

- Cooperation—Coordination between various departments within one jurisdiction is often difficult; coordination between jurisdictions can be even more problematic. This common stumbling block underscores the need for strong leadership and buy-in from leaders in each of the jurisdictions. Such visible support sends a message to all entities that the project and thus the cooperation to execute the project is expected at the highest level.
- Regional governance simultaneous with local scale work—Though many regions have a metropolitan planning organization (MPO) or a regional council of governments, most often these bodies, though dedicated to regional planning, do not have much, if any, power to coordinate development at the regional scale. At best, they are a coordinating body but the member jurisdictions still act in their own best interest at the end of the day. This is particularly true with economic development where member jurisdictions often out-bid each other to attract new employers. Successful regional greenway efforts seem to develop a new organizing structure of their own, such as a regional park district, with its own set of powers that are separate from those of the local MPO.

- Funding—Financing such projects, whether regional in nature or a single trail or greenway, is always a challenge. Parks are often considered expendable when local budgets are tight. However, there signs that funding such projects are becoming easier. For nearly twelve years now the U.S. Department of Transportation has funded the Transportation Enhancements program, which is administered through each state DOT. Also, the Land Trust Alliance has documented a significant number of state and local bonding and taxing ballot initiatives over the past several election cycles that indicate the public's increasing desire to set aside open space. Funding of such projects appears to enjoy bipartisan support.

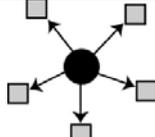
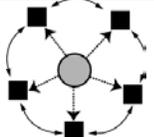
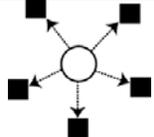
The review of the case studies also identified several trends in large-scale public works projects.

- Public-Private Partnership—such partnerships, for a variety of projects, have enjoyed increasing success. The development of a regional greenway system is a natural for such partnerships given the quality-of-life benefits that are produced. Stories abound now of how employers are seeking to locate in areas with significant quality of life amenities because such facilities are key in attracting and retaining a quality workforce. On a smaller scale, small businesses are often the direct beneficiaries of such facilities, whether these are eating establishments, a bed & breakfast, or a bike shop. Too, many residential developers have noticed the increased value to their properties if they provide or connect to a trail or greenway.
- Multiple objectives—increasingly, proponents of trails and greenways are articulating a more sophisticated view or understanding of the benefits that such facilities can provide not just to a neighborhood, but to a whole region. The multiple benefits of a regional network mean that the breadth of support is growing. What was once the purview of parks and recreation department, is now involving the transportation department and more recently, the public health department as concerns over obesity rates increases.

Other mechanisms exist for creating organizing structures for regional greenway systems. For example, California, Mississippi, and Virginia have enacted legislation permitting the creation of a regional parks authority or district. In each case, the enabling legislation addressed the powers granted to the new entity, including the governing structure and permitted funding powers, such as the ability to let bonds.

Alternatively, the St. Louis region (Missouri and Illinois) developed a ballot initiative that was approved by voters in the affected counties of each state. Like the state-enabled initiatives above, the St. Louis example set up a regional authority, complete with a governing structure and revenue-generating authority.

Table 2.1: Models for Regional Greenway Development and Implementation

	Type 1	Type 2	Type 3	Type 4
Description	Strong centralized agency influences projects within single or few jurisdictions.	Centralized entity serves as umbrella over multiple jurisdictions and has primary control over implementation.	Regional agency empowers jurisdictions through initial stages and then partners for implementation.	Subordinate regional agency acts as reference point for stronger jurisdictions to implement individual pieces of greenway system.
Advantages	Unified. Direct control. Effective for smaller jurisdictions within a larger framework. Strong leadership can be effective and visible. Good possibilities for citizen involvement in broader vision.	Strong central leadership can coordinate multiple agency efforts. Stronger funding base from wider geographic area. Coordination of work across various geographic areas; broader perspective and vision. Allows more progressive jurisdictions to proceed without/ahead of slower, more reluctant jurisdictions.	Encourages coordination among jurisdictions. Increased power at the local level. Leadership can develop in local jurisdictions. Regional or state funding can be prioritized across entire project.	Grassroots efforts are done at a manageable scale over a long period of time. Ample room for private groups to put forth initiatives. Strong local control.
Disadvantages	Potential difficulty in connecting to bordering jurisdictions or systems or for broader plans. May not leverage diverse sources of funding.	Plan may not be a priority within each local jurisdiction. Potentially less grassroots support and public participation.	Coordination may be optional between jurisdictions. Implementation may be slower with shared responsibility across many agencies.	No regional leadership for coordination. Shared regional vision is lacking. Lack of commitment by regional government is a barrier. Less ability to take advantage of funding possibilities in a holistic way for the network.
Schematic				

Source: Erickson, 1997.

Harnik (2003), found that the creation and maintenance of city parks share many of the same characteristics found by Erickson. The seven measures of an excellent city park system include:

- A clear expression of purpose of the park system.
- Ongoing planning and community involvement.
- Sufficient assets in land, staffing, and equipment to meet the system's goals.
- Equitable access.
- User satisfaction.
- Safety from physical hazards and crime.
- Benefits for the city beyond the boundaries of the parks.

Rails-to-Trails Conservancy's effort with several other non-profit organizations and state and local government agencies in the seven-county southeast Michigan area, including Detroit, has provided a valuable learning experience of the steps a region can take to develop and implement a regional greenway system. Details associated with this effort are used to illustrate the remainder of this report, including the pieces needed to create a regional greenways system as well as the process for putting the pieces together. The southeast Michigan example serves as a distinctly different method of creating a regional project as it came from the grassroots and involves no specific state or local legislative activity.

3.0 Pieces of the Puzzle

The creation of a regional trail and greenway system requires four basic elements: land, funding, people, and a process for putting it all together. This section details the first three of these elements.

3.1 Land: Types and Protection

Regional greenway plans can include many different types of corridors. By including diverse resource types, the vision is able to address multiple greenway functions effectively. Table 3.1 shows the typical strengths of each corridor type with respect to six common greenway functions.

Table 3.1: Corridor Types

Corridor Types	Corridor Functions					
	Recreation	Transportation	Conservation	Water Quality	Education	Economic
Abandoned railroads	X	X	X			X
Active railroads	X	X				X
River/stream basins	X		X	X	X	X
Parks/public lands	X		X	X	X	X
Road corridors	X	X				X
Utility corridors	X	X	X			X
Private lands			X	X		

Land for greenways can be acquired through a variety of mechanisms as detailed in Table 3.2.

Table 3.2: Land Protection Through Transactions

Method	Description
Land purchase	Purchase of all rights in land. Also called "fee simple" purchase.
Easement purchase	Purchase of specified land rights from a landowner. For example, an easement may allow public access, may specify that land be left in a natural state, or may allow specified uses by the landowner (e.g., farming). Assessments and property taxes are reduced in proportion to the reduction in land value due to the easement. When an easement disallows further development, it may be called "purchase of development rights."
Leases or use agreements	Land rental or negotiated use (usually for a fee) for specified purposes and duration.
Donation	Donation by a landowner to the public of land or an easement. Allows the donor to deduct the appraised value of the donation from income on federal income taxes and removes that value from amounts subject to capital-gains and estate taxes. Donation of an easement reduces the donor's property taxes in proportion to the easement's value.
Bargain sale	Sale of land at a price below the land's appraised value. The seller can deduct the sacrificed value from taxable income and exclude it from capital gains.
Purchase of options	A technique to allow time to raise funds or make arrangements for permanent

	protection. In selling an option on land, the seller gives the buyer the right to buy the land (or an easement) at a specified price until a specified date.
Transfer of development rights (TDR)	The transfer from a "sending zone" to a "receiving zone" of specified development rights to reduce the allowable development in the sending zone and allow more intense development in the receiving zone. The receiver can purchase the rights from the sender or, if the same person owns both areas, the rights can simply be transferred.
Land exchange	For example, the swapping of publicly owned developable land for privately owned land with conservation value.

Land for greenways can be protected through the following techniques, which involve regulations, zoning, planning, and negotiated agreements.

Table 3.3: Land Protection Through Regulations

Method	Description
Cluster development / open-space zoning	Concentration of development on part of a site to preserve open space and protect natural features on the rest. This technique, implemented through zoning and negotiation, can reduce infrastructure costs for developers. Typically, the open space remains privately owned (e.g., by a homeowners' association) and its maintenance is ensured through a contractual development agreement with the community.
Overlay zoning	A separate zone overlaid on preexisting zones which imposes additional requirements. Useful for protecting natural features and other features.
Official maps	Maps which may be adopted by cities and villages to designate boundaries for planned streets, parks, etc.
Development agreement	A contract negotiated between a community and a developer or landowner which describes their mutual obligations with regard to a development. For developers, these agreements can reduce uncertainties; for communities, the agreements can protect community interests such as securing open space. A site maintenance agreement, a type of development agreement, can ensure ongoing maintenance.
Farmland tools	While not specifically for greenways, these techniques may help preserve agricultural land near greenways. Methods include mapping of prime agricultural lands, special agricultural zoning techniques.
Techniques for sensitive lands	Zoning and regulations can provide special protection for shore lands, wetlands, floodplains, woodlands, steep slopes, and habitat areas and corridors. Regulation helps protect the public interest in clean water, avoidance of flood damage, cleansing of air by forests, minimizing erosion, diversity in plant and animal populations, etc.
Techniques for protecting water quality	Planning, zoning, and regulations can help protect surface water and groundwater. Septic systems, land use, and storm water can receive regulatory attention.

3.2 Funding

Funding sources for greenways are presented in Table 3.4. To receive funds from most state and federal programs, communities must provide match money, and projects must

be in either a parks and recreation plan or a recreation and open-space component in a comprehensive plan, and/or transportation improvement plan.

Table 3.4: Funding Sources and Mechanisms

Source	Description
TEA-21 "Enhancements" "Rec. Trails"	1998 federal transportation legislation made this an important funding source for non-motorized transportation projects.
Land and Water Conservation Fund	Funds from this federal program administered by the National Park Service are designed to help communities preserve land and water resources.
Millages and bonds	Local, county, or state millages and bond issues to preserve open space have seen a surge in popularity over the last few election cycles.
Parks and recreation budgets	Greenway funding can come from the budgets of willing agencies, which may include local and county parks and recreation departments.
Leases	Public greenway corridors can obtain lease revenue from compatible uses, such as buried pipelines or communication lines. There can be one-time payments for acquisition or development or annual payments for operation and maintenance.
Land trusts	National, state, regional, county, and local private land trusts (or conservancies) can purchase land for resale to public agencies, buy options to protect land temporarily, receive land donations, put together land deals, and provide technical assistance. As private entities, land trusts can often act more quickly than public agencies.
Other private Sources	Willing businesses, foundations, organizations, and individuals can donate cash, land, easements, and services. Civic groups and school groups might help with trail development or maintenance through adopt-a- trail programs.
Potential trail user Fees	User fees, if established, could generate revenue.

3.3 Players

The list below gives some of the key organizations, public and private, that can be involved with planning trails and greenways. A key element of successful greenway projects is inclusiveness. Because greenways provide benefit to just about any interest group or government agency, it is possible to develop a diverse coalition.

Table 3.5: Key Participants

Local government	Various entities within city and county governments responsible for planning, funding, and implementing most local projects. These include the planning department, parks and recreation department, and the transportation department.
Regional government	Often there are regional and sub-regional public entities which may be useful, if not necessary, to include in a project, such as school districts, water and power districts, and regional councils of government/metropolitan planning organizations.
State government	A variety of state-level governments are useful either as funding sources, implementing sources, or land-holding sources. These include the state department of transportation, department of natural resources / department of environmental

	quality, and the state university system.
Federal government	The National Park Service's Rivers and Trails Conservation Assistance Program, The U.S. Forest Service, Environmental Protection Agency, Centers for Disease Control and Prevention,
Private	The Rails-to-Trails Conservancy's Trails and Greenways Information Clearinghouse, state and local land conservancies (many of which belong to the Land Trust Alliance), businesses and associations (landscaping and planning and design firms, convention and visitors bureau), conservation and environmental organizations, historical societies, organizations useful for trail building and maintenance (boys and girls clubs, Rotary clubs, garden clubs), and trail user groups (bicyclists, runners, walkers, bird watchers, etc).

The three types of elements reviewed above, land, people, and money, are the core ingredients for a regional greenway project. These pieces are then brought together under an overall organizational paradigm, and are assembled. The following, based on RTC's experience in Southeast Michigan, provides one sequence of events that could be used to assemble the pieces.

4.0 Process: Putting the Pieces Together

A process is needed to put all those pieces together but because every region is different in terms of the number and types of political jurisdictions, existing planning bodies, and their powers to implement and fund, it is impossible to construct a cookie-cutter approach for creating a regional greenway system. Perhaps more instructive is a detailed case study. The following example from the seven-county Southeast Michigan experience shows how that region took the first steps toward developing an organization that would put together a plan for a regional greenway network. The bottom-up approach used in the Southeast Michigan project is worth examining in detail because it is a more organic and, perhaps, complicated process than the legislatively-generated mechanisms produced in California, Mississippi, and Virginia, or the ballot initiative produce in the St. Louis region. Many of the steps discussed here could result in a legislative or ballot approach if that is how a region wanted to create a regional greenway implementation mechanism as compared to the end result of the Southeast Michigan experience which has resulted in a loose affiliation of political jurisdictions and non-governmental organizations (NGO).

The initial idea for a regional trail system can come from a single citizen, an advocacy organization such as a cycling club, a politician, or city/county planning staff. Regardless, of how it starts, it is eventually necessary to establish support for the project by all of the above. These early steps can be accomplished by developing a general concept and vision for a regional greenway system for your area. This can be as simple as a page of text, a map, and a few photographs. This is the seed. Depending on who plants this seed, the next steps vary. If an advocacy group conceives the idea, the next step needs to be political support so that a proper planning process can be developed and executes. If the idea emanates from city/county staff, some level of political support needs to be established before substantial staff time can be expended on furthering the plan. Lastly, if the idea comes from an elected official, some initial planning may be started but citizen input and support should be sought early in the process. In the case of the Southeast Michigan project, informal discussions between NGOs and various government entities led initially to the creation of a Regional Greenway Advisory Committee (RGAC) which became the launching pad for the Southeast Michigan greenways project. See Figure 4.1 for a flowchart of the overall process.

Figure 4.1—Master Project Flowchart

Project Flowchart	
Regional Greenway Advisory Committee formed out of informal discussions between interested parties. Purpose of RGAC is to initiate more formal structure for project development and implementation.	Detailed Project Flowcharts ↓ V
↓ V	
RGAC develops Coordination Proposal consisting of three elements: 1) Greenway Coordinating Board (GCB)	←Figure 4.2

2) Greenway Leadership Council 3) Funding pool RGAC disbands, some members become part of GCB.	
↓ V	
GCB, as lead entity, develops and initiates a four-phase project development and implementation plan. <ol style="list-style-type: none"> 1) Organizing the project 2) Resource and issue assessment 3) Network implementation planning 4) Demonstration project planning 	←Figure 4.3 ←Figure 4.4 ←Figure 4.5 ←Figure 4.6

Thus, the Southeast Michigan regional greenways project experience can effectively be broken down into two stages. First, the creation of the Regional Greenways Advisory Committee as a product of the informal discussions between various entities interested in the concept of a regional greenway system. The RGAC creates a Coordination Proposal which, upon adoption, produces the more formal structure necessary to develop the regional greenway plan. The RGAC then disbands, leaving the Greenway Coordinating Board, proposed by the RGAC and adopted by interested parties as the formal organizing structure to create a four-phase project development and implementation plan. The following, derived from RTC's experience with the Southeast Michigan Greenway program provides a more detailed discussion of each stage.

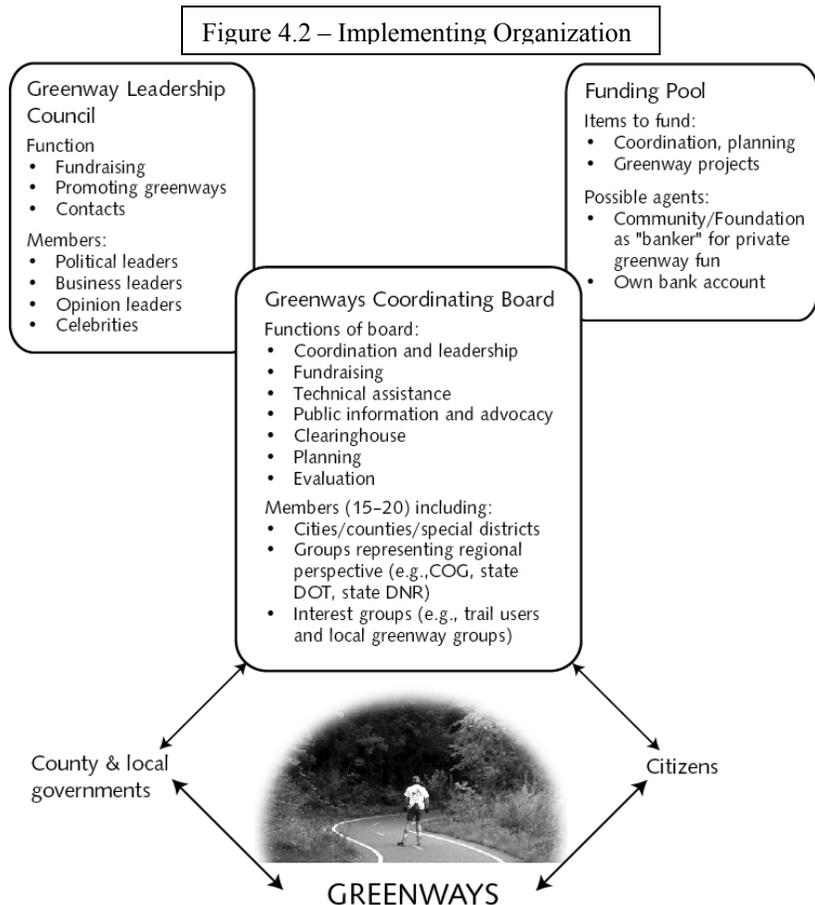


Figure 4.2 depicts the basic structure, relationship, and purposes of each element of the more formal GCB and its supporting elements, the Greenway Leadership Council and the Funding Pool. With this structure, the GCB sets out to implement the work through the four phases of development and implementation.

Figure 4.3 indicates the essential mechanism for organizing the project, including development of participants and project goals.

With the essential participants, goals, and concept defined, greater detail is then needed to define the project. Figure 4.4 depicts the sequence of events used to establish/gather/inventory resources that can be used to create a regional greenway system. Tables 4.5, 4.6, and 4.7 catalogue the actual resources, purposes, and issues that were developed during the Southeast Michigan project during the sequence of events shown in Figure 4.4.

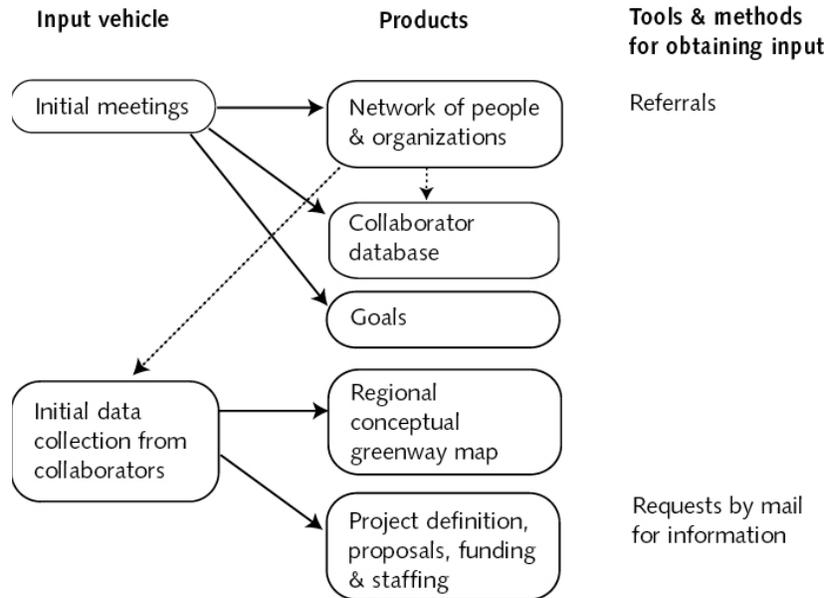


Figure 4.3-Organizing the Project
Purpose: to define goals and engage

Figure 4.4-Resource and Issue Assessment
Purpose: to collect and present the information needed for informed decision making, as detailed in the following tables.

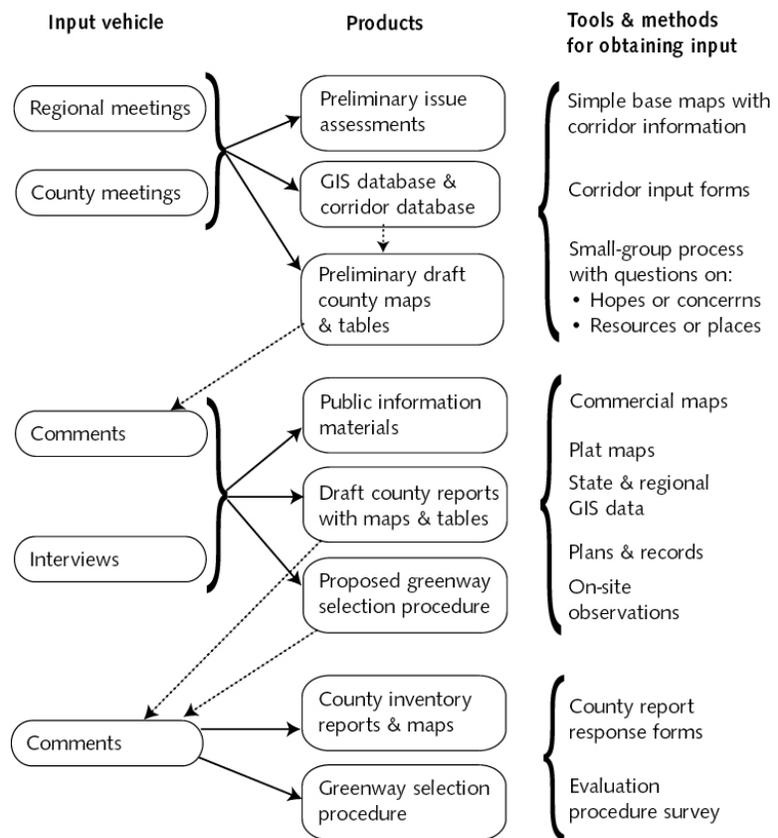


Table 4.5: Resources/places that should be included in the regional greenway system

Resource Category	Resources to include in Greenway System
Community and Municipal resources	Community facilities, such as schools, hospitals, churches, cultural event areas, and municipal lands. Villages, communities, and cities (included in or accessible to system).
Facilities	Rest areas, parking, and other support facilities, using existing facilities as much as possible.
Historic resources	Significant historic and cultural resources, such as old tunnels, bridges, canals, or native American trading/migration routes.
Natural areas	Natural areas, ecologically diverse lands, and wildlife habitats, but with limited or controlled public access to environmentally sensitive areas.
Parks and public	Local, county, regional, and state parks and public lands.
Scenic roads, boulevards, roads	Road rights-of-way, existing bike routes, and secondary and rural roads where appropriate.
Trails	Existing trails of all types.
Utility and railroad rights-of-way and industrialized lands	Utility (electric, natural gas, fiber optic) and abandoned railroad rights-of-way if they are not hazardous, unsafe, or environmentally contaminated.
Water-based resources	All river systems, floodplains and wetlands.

Table 4.6: Purposes that the regional greenway system should serve.

Goal	The Greenway System Should ...
Alternative transportation	Provide a non-motorized transportation network that connects communities (home, work, school) to recreation and nature.
Land use planning	Conserve green space, manage growth, and enhance community development.
Linkage	Link local, regional, and state parks and public lands; link urban areas to rural areas; link community resources (neighborhoods, schools, commercial areas) to each other and to parks and recreation facilities.
Public access	Provide "doorstep" accessibility to recreation trails and natural areas, and be accessible to all ages, socio-economic levels, and ranges of physical abilities.
Protection of threatened & significant resources	Preserve and protect significant and sensitive natural features, natural areas, and wildlife habitats; provide ecological linkages to prevent fragmentation of natural resources; help define and protect the region's natural, cultural, and industrial heritage.
Recreation	Safe, long-distance, multi-use, non-motorized recreation trails.

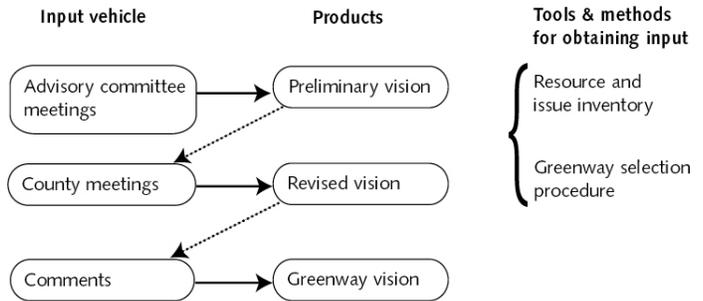
Economic revitalization	Improve the quality of life in the region; provide economic and tourism benefits.
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Table 4.7: Issues / Goals and Concerns for the planning, creation, and management of the regional greenway system.

Implementation Goal	Regional Greenway System Planning Should...
Funding	Identify funding sources for acquisition, development, management, and maintenance.
Greenway development	Be part of all local planning processes, with plans evolving from neighborhood to local to regional system; develop uniform design standards for the regional system.
Greenway maintenance	Develop a continuing maintenance program and utilize user groups in maintenance (Adopt-a-Trail).
Public involvement	Reflect diverse public interests and generate strong public support for implementation; develop public education and marketing materials to build support for greenways.
Regional coordination	How will the intergovernmental cooperation and regional coordination needed for implementing the regional greenway system be established? Will the regional system have uniform development and design standards? Build intergovernmental cooperation; provide technical assistance, information, and support to community and municipal greenway projects.
Safety	How can we maintain safe and secure greenways for the users and adjacent landowners? Minimize motorized and non-motorized use conflicts in greenways; design and develop greenways with safety and mixed use in mind; develop standards of safety and signage throughout the greenway system.
Landowners	How will liability concerns for both public and private landowners be addressed? How will the safety and liability concerns of adjacent landowners be addressed?
Management	Who will manage and operate the regional greenway system? How can we establish a permanent system?
Protection of threatened and significant resources	How will public access and protection of significant natural and cultural resources in the greenway system be managed?
Use	What kinds of recreational uses will be permitted in the greenway system and how will we manage conflicts among different users?

Using the information in the above tables as inputs, Figure 4.5 proposes a sequence of events leading to a coordinating proposal which then leads to implementation.

Figure 4.5-Network implementation planning
Purpose: create greenway network vision and propose a mechanism for coordinating its implementation.



The next step, depicted in Figure 4.6, is to select one or more segments of regional plan to use as a demonstration project. Typically, building a segment as a demonstration projects helps to work out kinks in the public implementation infrastructure as well as to build public support for the facilities and to demonstrate that the plan is serious and is moving forward from concept to reality.

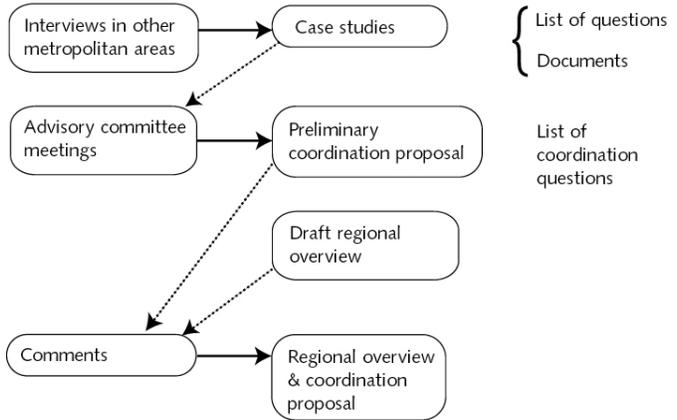
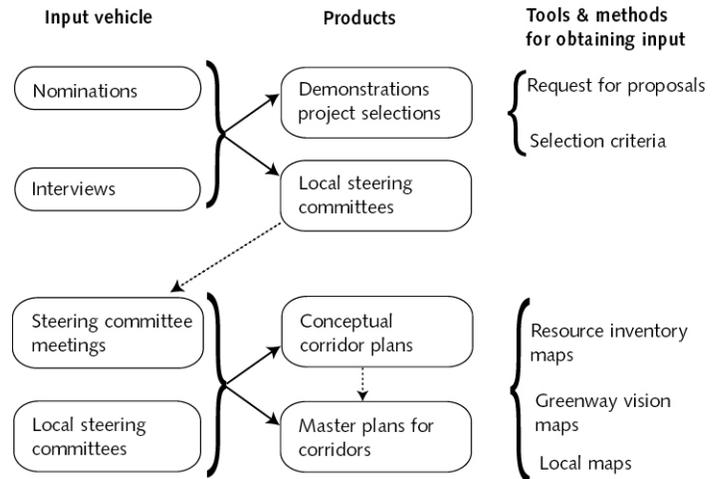


FIGURE 4.6-Demonstration Project Planning
Purpose: to begin the process of implementing selected greenways and to provide models for future projects.



5.0 Conclusion

The creation of a regional trail and greenway plan, let alone the implementation of such a plan, is a time-consuming process requiring patience and perseverance on the part of all involved. While there certainly is no one correct way to go about creating a regional greenway system, key ingredients seem to include strong and persistent leadership, development of a broad coalition, development of a thorough plan, and a clear articulation of purpose.

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Resource Links

Rails-to-Trails Conservancy

www.railtrails.org

- Join RTC
- Search for open trails on TrailLink

Trails and Greenways Clearinghouse

www.trailsandgreenways.org

- Look under “resources, online manuals” for:
 - Rail-Trails and Liability—a primer on liability issues
 - Rail-Trails and Safe Communities—a discussion of crime on trails
 - Rails-with-Trails—a look at trails built along active rail lines
 - Acquiring Rail Corridors
 - Secrets of Successful Rail Trails

National Park Service—Rivers and Trails Program, U.S. Department of the Interior

http://www.nps.gov/ncrc/programs/rtca/helpfultools/ht_publications.html

- A variety of useful resources

Federal Highway Administration, U.S. Department of Transportation

www.fhwa.dot.gov/environment

- Transportation Enhancements funding
- Recreational Trails funding

National Transportation Enhancements Clearinghouse

www.enhancements.org

- Transportation Enhancements funding
- Look up useful state-level contacts
- Bicycle and pedestrian papers from the Transportation Research Board

Pedestrian and Bicycle Information Center

www.walkinginfo.org and www.bicyclinginfo.org

- Comprehensive walking and bicycle facility planning, design, and funding information.

Land Trust Alliance

www.lta.org

- Information on land trusts
- Information on insurance for private non-profits

Alta Transportation Consulting

www.altaplanning.com

- Federal rails-with-trails study

Island Press

www.islandpress.com

- “Trails for the 21st Century: a planning, design, and management manual.” \$30
- “Road Ecology: Science and Solutions.” \$28

American Association of State Highway and Transportation Officials

www.aashto.org

- “A Guide to Designing Bicycle Facilities.” \$30

Access Board

www.access-board.gov

- Americans with Disabilities Act rules and regulations.

American Trails

www.americantrails.org

- Good on-line resource library and newsletter.

Association of Pedestrian and Bicycle Professionals

www.apbp.org

- Provides training courses relating to the design, implementation, and management of bicycle and pedestrian facilities. Good semi-monthly newsletter.

Manual of Uniform Traffic Control Devices

<http://mutcd.fhwa.dot.gov/>

- Provides signage and pavement marking guidelines.